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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,872	10/20/2003	Kuan-Ching Chang	2450-0572P	2067
2292 7590 01/12/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER: HENN, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2622	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		01/12/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary

Application No.

10/687,872

Applicant(s)

CHANG, KUAN-CHING

Examiner

Timothy J. Henn

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17:2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Objections

2. Claims 11 and 12 are objected to because of the following informalities: Claims 11 and 12 recite the limitation "decoding said barcode pattern", however antecedent basis does not exist for "said barcode pattern" in claims 11 and 12. For the purposes of art rejection, claims 11 and 12 will be read as depending on claim 10. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 11 and 12 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

[claims 11 and 12]

Regarding claims 11 and 12, the claims recite outputting voice data to a microphone to transform the data into a voice. However, this process is not described

Art Unit: 2622

in the specification. As can be seen from Figure 3, the specification describes outputting voice data to speaker 60. For the purposes of art rejection, "microphone" in claims 11 and 12 will be read as "speaker".

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 4, 13, 14, 16, 17 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Chao et al. (US 2004/0041932).

[claim 1]

Regarding claim 1, Chao discloses a CMOS image sensor single chip integrated with a micro processing unit, comprising: a CMOS image sensor, used for detecting an input light as a digital image signal (Figure 4A, NxM Pixel Cell Array and Circuitry Region 150; Paragraph 0041) and a micro processing unit, used for receiving the digital image signal which is further processed to be an application signal to be outputted (Figure 4A, Circuitry Region 150; Paragraph 0041; The examiner notes that "application signal" as claimed is not defined as having any specific properties, therefore, any processed image signal can be read as being an "application signal" for the purposes of claim rejection).

[claim 2]

Art Unit: 2622

Regarding claim 2, Chao discloses a CMOS image sensor comprising: an image sensing array (Figure 4A, NxM Pixel Cell Array), and a readout circuit, timing and control circuit and an A-to-D converter (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 4]

Regarding claim 4, Chao discloses a pre-amplify unit, used to amplify the sensing voltage as an image signal (e.g. Figure 10, transistor Msf).

[claim 13]

Regarding claim 13, Chao discloses a processing unit which is a DSP (Figure 4A, Circuitry Region 150; Paragraph 0041). The examiner notes that a DSP can be read as a "Micro Controller Unit" as claimed.

[claim 14]

Regarding claim 14, Chao discloses a processing unit which is a DSP (Figure 4A, Circuitry Region 150; Paragraph 0041). The examiner notes that a DSP can be read as a "microprocessor" as claimed.

[claim 15]

Regarding claim 15, Chao discloses a processing unit which is a DSP (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 16]

Regarding claim 16, Chao discloses a CMOS image sensor single chip integrated with a micro processing unit, comprising: a CMOS image sensor, used for detecting an input light as a digital image signal (Figure 4A, NxM Pixel Cell Array and

Art Unit: 2622

Circuitry Region 150; Paragraph 0041) and a micro processing unit, used for controlling exposure and readout time of the CMOS image sensor (Figure 4A, Circuitry Region 150; Paragraph 0041 "timing and control circuit") and receiving the digital image signal which is further processed to be an application signal to be outputted (Figure 4A, Circuitry Region 150; Paragraph 0041; The examiner notes that "application signal" as claimed is not defined as having any specific properties, therefore, any processed image signal can be read as being an "application signal" for the purposes of claim rejection).

[claim 17]

Regarding claim 17, Chao discloses Chao discloses a CMOS image sensor comprising: an image sensing array (Figure 4A, NxM Pixel Cell Array), and a readout circuit and an A-to-D converter (Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 19]

Regarding claim 19, Chao discloses a pre-amplify unit, used to amplify the sensing voltage as an image signal (e.g. Figure 10, transistor Msf).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2622

6. Claims 3, 5, 6, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 2004/0041932).

[claims 3 and 18]

Regarding claims 3 and 18, Chao discloses a CMOS image sensor with rows and columns and a readout circuit (Figure 4A; Paragraph 0041), but does not specifically disclose row and column readout circuits. Official Notice is taken that the use of row and column readout circuits are notoriously well known in the art as components which make up an image sensor readout circuit and allow pixels from specific rows and columns to be readout. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include row and column readout circuits as part of the readout circuitry of Chao to readout pixel signals from specific rows and columns as desired.

[claim 5]

Regarding claim 5, Chao discloses a CMOS image sensor, but does not disclose a compression module. Official Notice is taken that the use of compression modules in image processing circuits is notoriously well known in the art to reduce the amount of data that is needed to represent a captured image. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an image compression module as claimed to reduce the amount of data needed to represent the captured image.

[claim 6]

Regarding claim 6, Chao discloses a CMOS image sensor, but does not disclose a compression or decompression module. Official Notice is taken that the use of compression modules in image processing circuits is notoriously well known in the art to reduce the amount of data that is needed to represent a captured image. It is further well known in the art that if an image is compressed, it must be compressed with a decompression module prior to being displayed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include compression and decompression modules as claimed to reduce the amount of data needed to represent the captured image and allow playback of compressed images.

7. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 2004/0041932) in view of Nelson et al. (US 6,191,406).

[claim 7]

Regarding claim 7, Chao discloses a CMOS image sensor, but does not disclose an image sensor which is a linear image sensor. Nelson discloses that linear sensors can be used instead of area image sensors (c. 6, ll. 6-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the area image sensor of Chao with a linear sensor as an art recognized equivalent device.

[claim 8]

Regarding claim 8, Chao in view of Nelson discloses a linear CMOS image sensor (see claim 7) and a readout circuit, timing and control circuit and an A-to-D

Art Unit: 2622

converter (Chao; Figure 4A, Circuitry Region 150; Paragraph 0041).

[claim 9]

Regarding claim 9, Chao discloses a pre-amplify unit, used to amplify the sensing voltage as an image signal (e.g. Figure 10, transistor M_{sf}).

[claim 10]

Regarding claim 10, Chao does not disclose a barcode-decoding module. Nelson discloses that an image pickup device can be used to read data encoded in a barcode and outputting the read data (e.g. c. 4, ll. 45-60; c. 11, ll. 15-48; Figure 1). The examiner notes that in order to retrieve and playback the encoded data, a barcode decoding module must inherently be included. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a barcode-decoding module as claimed to allow data encoded in a barcode to be read and played-back by the system of Chao.

[claim 11]

Regarding claim 11, Nelson discloses reading and decoding a barcode pattern and outputting the data to a memory device and a speaker to reproduce audio (c. 11, ll. 15-60). The examiner notes that to output audio data to a speaker, the data must be converted to an analog format first, thus requiring a DAC to be present in the system.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 2004/0041932) in view of Nelson et al. (US 6,191,406) in view of Silverbrook et

Art Unit: 2622

al. (US 6,924,835).

[claim 12]

Regarding claim 12, Chao in view of Nelson discloses all limitations except processing and displaying an image. Silverbrook discloses that image data can be stored along with audio data in an encoded form on a photograph (c. 8, ll. 12-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include image data with the encoded audio data of Chao in view of Nelson and to reproduce the image data along with the audio data to allow a user to view corresponding image data while listening to the decoded audio data. The examiner notes that to reproduce image data as described, image processing and display components would be necessary.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- | | | |
|-----|-------------|--------------|
| i. | Shaw et al. | US 6,606,122 |
| ii. | Yang et al. | US 6,665,012 |

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

Art Unit: 2622

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJH
1/4/2006



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